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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/734,246  | 12/15/2003  | Masahiro Yasukawa    | 117838              | 2282             |
| 25944   | 7590        | 08/08/2005           | EXAMINER            |                  |
| OLIFF & BERRIDGE, PLC<br>P.O. BOX 19928<br>ALEXANDRIA, VA 22320 |             |                      | NGUYEN, THANH T     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2813                |                  |

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/734,246

Applicant(s)

YASUKAWA, MASAHIRO

Examiner

Thanh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Request for Continued Examination***

The request filed on 5/17/05 for a Request for Continued Examination (RCE) under 37 CFR 1.114 is acceptable and an RCE has been established. An action on the RCE follows.

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119 (a)-(d).

### ***Oath/Declaration***

Oath/Declaration filed on 4/6/04 has been considered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Murade (U.S. Patent No. 6,388,721).

Referring to figures 3a-4d, Murade teaches a method for manufacturing an electro-optical substrate including a composite base plate obtained by joining a support plate to a semiconductor plate having semiconductor layers, comprising:

forming a light-shielding layer (7, see figure 3a), having a predetermined pattern, over a support plate;

forming an insulating layer (11, see figure 3b) over the light-shielding layer (7) having the predetermined pattern;

providing a semiconductor layer (1, see figure 3c) over the insulating layer (11);

partially oxidizing the semiconductor layer to form an oxide layer (12, see figure 3d); and

removing the oxide layer (see figure 4c, wherein the oxide layer is partially removed to form the data line (3)), the oxide layer having a thickness smaller than that of the insulating layer (see figure 3e, col. 11, lines 25-32, lines 52-67).

Regarding to claim 2. patterning the semiconductor layer (see figure 3c, col. 11, lines 42-50); and

oxidizing parts of the semiconductor layer having a predetermined pattern to form the oxide layer (see figure 3d, col. 11, lines 51-67), the patterning step and oxidizing step being performed after the semiconductor layer-providing step (see figure 3a-3d).

Regarding to claim 4, the oxide layer having a thickness smaller than that of parts of the insulating layer disposed in areas above which the semiconductor layer is not placed, and which are disposed on the light-shielding layer (see figures 3a-3d).

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Regarding to claim 5, forming a silicon nitride layer or silicon oxide nitride layer between the light- shielding layer and the insulating layer (see figure 3c, col. 11, lines 25-41). Noted that wherein the insulating layer is the top portion of layer 11 and the silicon nitride/oxide is the bottom portion of layer 11)

Regarding to claim 6, the semiconductor layer-providing step including a sub-step of joining a single-crystal semiconductor plate (10) including the semiconductor layer (1) to a support plate (10) including the insulating layer (11, see figures 3a-3e).

Regarding to claim 7, the light-shielding layer containing a high-melting metal or a silicide containing a high-melting metal (see col. 8, lines 45-48).

#### ***Allowable Subject Matter***

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 3 are objected because none of the prior art alone or in combination teaches or suggests the particular subset of the process steps in oxidizing parts of the semiconductor layer to form gate oxide layers, the semiconductor layer-oxidizing step being performed after the oxide layer- removing step.

#### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Nguyen whose telephone number is (571) 272-1695, or by

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Email via address Thanh.Nguyen@uspto.gov. The examiner can normally be reached on Monday-Thursday from 6:00AM to 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, can be reached on (571) 272-1702. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956 (See **MPEP 203.08**).



Thanh Nguyen  
Patent Examiner  
Patent Examining Group 2800

TTN